

METHOD AND APPARATUS FOR PERFORMING ECHO-CANCELLATION FOR COMMUNICATIONS TRANSMIT CIRCUITRY IN A MODEM CONTEXT

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ABSTRACT OF THE DISCLOSURE

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An improved echo cancellation technique may be employed by a server modem in a digital communication system. The disclosed echo cancellation technique provides not only for the cancellation of echo signals imparted on the received signals of a modem but also for the cancellation of various non-linearities that are present in a transmit circuitry. The echo canceler resident in the server modem may be initially trained to account for the echo signals imparted by an echo channel present in the communication system. In the preferred embodiment, the echo canceler samples an analog output signal of the transmit circuitry and produces an output signal representative of the echo signals and the non-linearities. In the context of the echo cancellation, a compensated digital signal is produced by subtracting the output signal of the echo canceler from an impaired digital signal to be received by the server modem, wherein the echo signals and non-linearities are substantially eliminated from the impaired digital signal.